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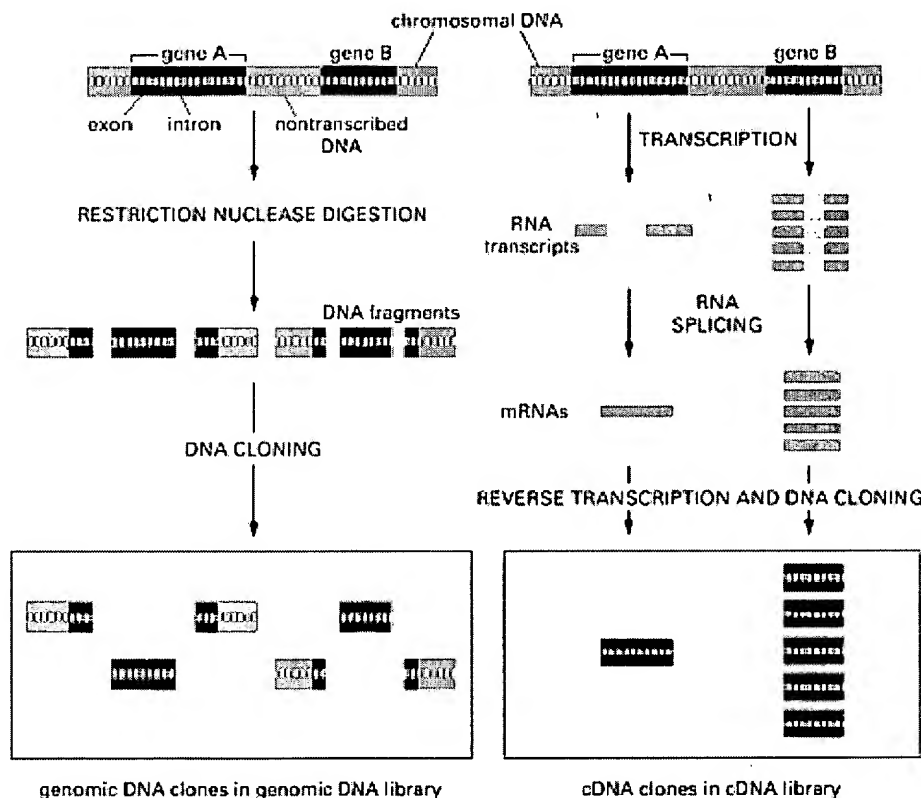
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### ***Molecular Biology of the Cell* ➔ III. Methods ➔ 8. Manipulating Proteins, DNA, and RNA ➔ Isolating, Cloning, and Sequencing DNA**



**Figure 8-35. The differences between cDNA clones and genomic DNA clones derived from the same region of DNA.** In this example gene A is infrequently transcribed, whereas gene B is frequently transcribed, and both genes contain introns (*green*). In the genomic DNA library, both the introns and the nontranscribed DNA (*pink*) are included in the clones, and most clones contain, at most, only part of the coding sequence of a gene (*red*). In the cDNA clones the intron sequences (*yellow*) have been removed by RNA splicing during the formation of the mRNA (*blue*), and a continuous coding sequence is therefore present in each clone. Because gene B is transcribed more abundantly than gene A in the cells from which the cDNA library was made, it is represented much more frequently than A in the cDNA library. In contrast, A and B are in principle represented equally in the genomic DNA library.

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